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09/443,692	11/19/1999	TAKESHI ANDO	13191	7589

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EXAMINER

LEE, TIMOTHY L

ART UNIT PAPER NUMBER

2697

DATE MAILED: 08/18/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/443,692

Applicant(s)

ANDO, TAKESHI

Examiner

Timothy Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2,3,5,8 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,5,8 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 2, 3, 5, 8, and 10 drawn to a data packet multi-access communicating method, classified in class 370, subclass 232.
  - II. Claims 11-14, drawn to a transmitting device in a mobile station, classified in class 455, subclass 73.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the modulating aspects of the transmitter mentioned in group II are not required for the patentability of group I. The subcombination has separate utility such as being used in a wireless communication system where there are fixed transmission rates.
3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution

on the merits. Accordingly, claims 11-14 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 2, 3, 5, 8, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Tiedemann, Jr. et al., hereinafter referred to as Tiedemann.

3. Regarding claims 2 and 10, Tiedemann discloses a communication system capable of variable rate transmission. Remote station 6 from Fig. 1 initiates high speed data transmission on the reverse link by requesting permission from channel scheduler 12 (receiving a transmission demand from each of a plurality of mobile station at a base station). See col. 6, lines 40-42. As shown in Fig. 2, the channel scheduler 12 connects to all selector elements within base station controller 10. See col. 7, lines 27-39. Based on collected information and system goals, the channel scheduler assigns the maximum transmission rate, and some of the collected information can include the following: number of scheduled and unscheduled tasks, the transmit power available to each remote station, the queue size, the set point, the transmission rate for the unscheduled tasks, the active member set of each remote station, the priority of remote stations, and the total power received from each cell (determining maximum rate by taking account of radio wave propagation condition...transmission demand...and a priority order of each said

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mobile station at said base station). See Fig. 7, and col. 9, lines 24-54. The frame error rate (FER) can also be taken into account when figuring out the transmission rates. For example, the channel scheduler can assign lower transmission rates to remote stations if the FER is above a predetermined threshold. See col. 16, lines 33-43. Also, the FER can be used as a factor in assigning priority, and as mentioned previously, the priority of each mobile station can be used in assigning the transmission rates. See col. 33, line 5-col. 34, line 13, and equation 14. Based on this, the channel scheduler also takes into account the frame error rate when deciding on the transmission rates (a transmission error ratio). After processing the collected information, channel scheduler 12 assigns the maximum scheduled transmission rate that can be used by each remote station 6 for high speed data transmission over the reverse link (notifying each said mobile station of said maximum transmission rate determined at said base station).

4. Regarding claim 3, the channel scheduler can wait until the next scheduling period and assigns a new rate based on the new collected information. In this manner, the maximum rate can be variable (variably changing a transmission rate according to the maximum rate). See Fig. 7, and col. 9, lines 24-54.

5. Regarding claim 5, as mentioned previously, the system can use the FER information to determine the condition of a transmission path. For example, if there is a repeated frame error, then this can indicate that the reverse link is impaired (a transmission condition detecting means...detecting its error ratio). As mentioned previously, the mobile stations can demand up to a maximum rate, or less depending on what the mobile station requires. The system uses collected information to determine the rate needed by each channel (transmission rate detecting means), and it assigns a maximum rate based on this information (a maximum rate control

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information determining means). See Fig. 7, and col. 9, lines 24-54. The channel scheduler is responsible for sending the maximum rate information (notifying said mobile station of said maximum rate). See Fig. 7, and col. 9, lines 47-49.

6. Regarding claim 8, at a base station 4, the reverse link signal is received by antenna 44 and provided to RF unit 42. RF unit 42 filters, amplifies, downconverts, and quantizes the reverse link signal and provides the digitized signal to channel element 40. Channel element 40 demodulates the digitized baseband signal, the inverse of the signal processing functions done at remote station 6 (a demodulation device). See col. 7, lines 9-26. The scheduling system disclosed in Tiedemann can be applied to any communication system capable of variable rate communication—high speed data transmission occurs over a single variable rate channel (variable rate communication path). Based on collected information and system goals, the channel scheduler assigns the maximum transmission rate—some of this collected data and system goals can include channel condition and a priority list of required performance (determining maximum rate by taking account of radio wave propagation condition; a maximum rate control). See col. 19, lines 14-29, and col. 18, lines 24-30. The system uses collected information to determine the rate needed by each channel (transmission rate detecting means). As mentioned previously, the FER can be used when deciding on the transmission rate (detecting its error ratio).

### ***Response to Arguments***

7. Applicant's arguments filed June 16, 2003 have been fully considered but they are not persuasive. In response to the Applicant's argument that Tiedemann does not disclose that the rate on the reverse link may be scheduled by taking into account the transmission error ratio,

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Tiedemann does in fact take into account an error rate when calculating the new transmission rate. Tiedemann mentions taking into account the frame error rate (FER) throughout the specification, and the places where this information is found was cited above in the rejection but will be repeated here briefly. Tiedemann discloses in col. 16, lines 33-43 that the channel scheduler can assign lower transmission rates to remote stations if the FER is too high. Also, Equation 14 shows a relationship between FER and the priority given to a remote station. As was disclosed before, the priority is taken into account when calculating the new transmission rate, so therefore, the FER is also taken into account. Based on all of this, it can be concluded that the system of Tiedemann does disclose that the rate on the reverse link can be scheduled by taking into account an error transmission ratio (where a ratio can be easily calculated from the error rate).

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

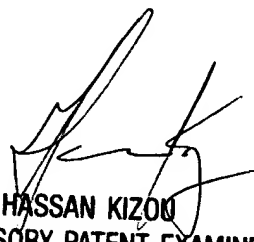
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Lee whose telephone number is (703)305-7349. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703)305-4744. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

TLL  
August 11, 2003



HASSAN KIZOU  
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